Jiacheng Liang

Curriculum Vitae

Contact

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Department of Mathematics, Krieger 211
Johns Hopkins University

Research Interests

The orientation theory from Thom spectra, higher algebra, reformulations of chromatic homotopy theory by formal (spectral) algebraic geometry, spectral moduli problems, and various intersections between homotopy theory and algebraic geometry.

🎓 Education

Johns Hopkins University   2024/08 – now

Ph.D. in Mathematics
Advisor: David Gepner

Southern University of Science and Technology, Shenzhen, China   2022/09 – 2024/06

Master in Mathematics
Advisor: Yifei Zhu

Sichuan University, Chengdu, Sichuan, China   2018/09 – 2022/06

B.S. in Physics

Short-term Visits

Southern University of Science and Technology, Shenzhen, China   2021/11 – 2022/05

Visiting student
Advisor: Yifei Zhu

Selected Talks

∞-topoi and parametrized homotopy theory   June 17, 2024

Graduate Topology Seminar at SUSTech

Picard ∞-groupoids, Picard groups of E_∞-rings and generalized Thom spectra   April 23, 2024

Graduate Topology Seminar at SUSTech

Barr-Beck Theorem, Morita theory and Brauer groups in ∞-categories   March 19, 2024

Graduate Topology Seminar at SUSTech

An overview of ∞-categories and higher algebra   December 26, 2023

Graduate Topology Seminar at SUSTech

The σ-orientation and its AHR E_∞-refinement $Mstring \to tmf$ August 17, 2023

IWoAT Summer School 2023: Operads, spectra, and multiplicative structures
BIMSA, Beijing, China

Thom spectra, infinite loop spaces, generalized cocycles, and the σ-orientation   May 23, 2023

Graduate Topology Seminar at SUSTech

Sites, Sheaves, Formal Groups and Stacks	December 06, 2022
Graduate Topology Seminar at SUSTech	
Elliptic curves and Abelian varieties	May 30, 2022
Undergraduate topology seminar, Sichuan University	
The Stable homotopy theory and EKMM framework	November 18, 2021
Graduate Topology Seminar at SUSTech	
Landweber exact theorem and Lubin-Tate spectra	November 02, 2020
Undergraduate topology seminar, Sichuan University	
Quillen's theorem: complex cobordism and formal groups	September 30, 2020
Undergraduate topology seminar, Sichuan University	
MO is a graded E-M spectrum by calculating Steenrod operations	June 21, 2020
Undergraduate topology seminar, Sichuan University	
Characteristic classes from viewpoint of algebraic topology	March 13, 2020
Undergraduate topology seminar, Sichuan University	
Brown representability theorem and generalized cohomology theories	December 15, 2019
Undergraduate topology seminar, Sichuan University	
Obstruction theory in algebraic topology	September 08, 2019
Undergraduate topology seminar, Sichuan University	
Serre spectral sequence and homotopy groups of spheres	June 25, 2019
Undergraduate topology seminar, Sichuan University	
A proof of Non-embeddability from Klein bottle into $\mathbf{R}^3$	May 8, 2019
Undergraduate topology seminar, Sichuan University	

👥 ORGANIZATION

- **Graduate Topology Seminar** at SUSTech — 2021-present
- **Undergraduate topology seminar** at Sichuan University — 2019-2022

TEACHING

- Teaching assistant for MA201b(Ordinary Differential Equation), Spring 2023.
- Grader for MAT8021, Spring 2023 (Algebraic topology).

MISCELLANEOUS

- **Blog** about algebraic topology: *www.zhihu.com/people/liang-jia-cheng-60-11/posts*
- Placed third in *Table Tennis Freshman Competition 2022* at department of mathematics, SUSTech

REFERENCES

- **Guozhen Wang**, *Fudan University*, wangguozhen@fudan.edu.cn
- **Zhouli Xu**, *University of California, San Diego*, xuzhouli@ucsd.edu
- **Zhen Huan**, *Huazhong University of Science and Technology*, 2019010151@hust.edu.cn
- **Yifei Zhu**, *Southern University of Science and Technology*, zyf@umn.edu
- **Jack Davies**, *Universität Bonn*, davies@math.uni-bonn.de